

O I P E J S  
FEB 26 2004  
U.S. PATENT & TRADEMARK OFFICE

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q76481

Nobuya ITOH, et al.

Appln. No.: 10/617,034

Group Art Unit: 1621

Confirmation No.: 2707

Examiner: Unknown

Filed: July 11, 2003

For: PROCESS FOR PRODUCING 3-HYDROXYCYCLOHEXANONE

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. §§ 1.97 and 1.98**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

<u>Serial No.</u>	<u>Applicant's Name</u>	<u>Filing Date</u>
10/608,533	ASAKO et al.	June 30, 2003
10/608,625	ASAKO et al.	June 30, 2003

1. European Patent Application No. 0 400 239 A1, published December 5, 1990, to Daito Koeki Kabushiki Kaisha.
2. European Patent Application No. 0 501 353 A2, published September 2, 1992, to Takeda Chemical Industries, Ltd.
3. European Patent Application No. 0 967 271 A1, published December 29, 1999, to Kaneka Corporation.

ITOH et al.

Appln. No. 10/617,034

INFORMATION DISCLOSURE STATEMENT

4. European Patent Application No 1 013 758 A2, published June 28, 2000, to Daicel Chemical Industries, Ltd.
5. ITOH et al., "Chiral alcohol production by NADH-dependent phenylacetaldehyde reductase coupled with *in situ* regeneration of NADA," *Eur. J. Biochem.* 269, 2002, pp. 2394-2402.
6. ITOH et al., "Chiral alcohol production by  $\beta$ -ketoester reductase from *Penicillium citrinum* coupled with regeneration system of NADPH", *Journal of Molecular Catalysis B Enzymatic*, Vol. 22, No. 3-4, June 2, 2003, pp. 247-248.
7. Japanese Patent Application No. 02-312593, published December 27, 1990, to Daito Corp., with English Abstract.
8. Japanese Patent No. 2532299, issued June 27, 1996, to Fuji Rebio Inc., with English Abstract.
9. KOMETANI et al., "Baker's Yeast Mediated Bioreduction. A New Procedure Using Ethanol as an Energ Source", *Chemistry Letters*, 1989, pp. 1465-1466.
10. NAKAMURA et al., "Recent developments in asymmetric reduction of ketones with biocatalysts", *Tetrahedron: Asymmetry Report Number 60*, *Tetrahedron: asymmetry*, 14, (2003), PP. 2659-2681.
11. SPILIOOTIS et al., "Enhanced Optical Purity of 3-Hydroxyesters Obtained by Baker's Yeast Reduction of 3-Ketoesters", *Tetrahedron Letters*, Vol. 31, No. 11, 1990, pp. 1615-1616.
12. U.S. Patent Application Publication No. 2003/0186400 A1, published October 2, 2003, to Asako et al.
13. U.S. Patent No. 4,895,979, issued January 23, 1990, to Noyori et al.
14. U.S. Patent No. 5,215,919, issued June 1, 1993, to Miya et al.
15. U.S. Patent No. 5,233,095, issued August 3, 1993, to Fellmann et al.

One copy of each of the listed documents, other than any U.S. patents and patent publications, is submitted herewith.

ITOH et al.  
Appln. No. 10/617,034  
INFORMATION DISCLOSURE STATEMENT

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after filing a request for continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,



John T. Callahan  
Registration No. 32,607

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE  
**23373**  
CUSTOMER NUMBER

Date: February 26, 2004

Substitute for Form 1449 A & B/PTO			<i>Complete if Known</i>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>			Application Number	10/617,034
			Confirmation Number	2707
			Filing Date	July 11, 2003
			First Named Inventor	Nobuya ITOH
			Art Unit	1621
			Examiner Name	Unknown
Sheet	1	of 21	Attorney Docket Number	Q76481

FEB 26 2004

JC34

(use as many sheets as necessary)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
		US 2003/0186400	A1	10-02-2003	Asako et al.
		US 4,895,979	A	01-23-1990	Noyori et al.
		US 5,215,919	A	06-01-1993	Miya et al.
		US			
		US			

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Translation <sup>6</sup>
		Country Code <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)			
		EP	0 400 239	A1	12-05-1990	Daito Koeki Kabushiki Kaisha	
		EP	0 501 353	A2	09-02-1992	Takeda Chemical Industries, Ltd.	
		EP	0 967 271	A1	12-29-1999	Kaneka Corporation	
		EP	1 013 758	A2	06-28-2000	Daicel Chemical Industries, Ltd.	
		JP	02-312593	A	12-27-1990	Daito Corp.	Abstract
		JP	2532299	B2	06-27-1996	Fuji Rebio Inc.	Abstract

NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published.				Translation <sup>6</sup>
		U.S. Patent Application No. 10/608,533 to ASAOKO et al., filed June 30, 2003				
		U.S. Patent Application No. 10/608,625 to ASAOKO et al., filed June 30, 2003				
		ITOH et al., "Chiral alcohol production by NADH-dependent phenylacetaldehyde reductase coupled with <i>in situ</i> regeneration of NADA," <i>Eur. J. Biochem.</i> 269, 2002, pp. 2394-2402				
		ITOH et al., "Chiral alcohol production by $\beta$ -ketoester reductase from <i>Penicillium citrinum</i> coupled with regeneration system of NADPH", <i>Journal of Molecular Catalysis B Enzymatic</i> , Vol. 22, No. 3-4, June 2, 2003, pp. 247-248				
		KOMETANI et al., "Baker's Yeast Mediated Bioreduction. A New Procedure Using Ethanol as an Energy Source", <i>Chemistry Letters</i> , 1989, pp. 1465-1466				
		NAKAMURA et al., "Recent developments in asymmetric reduction of ketones with biocatalysts", <i>Tetrahedron: Asymmetry Report Number 60</i> , <i>Tetrahedron: asymmetry</i> , 14, (2003), PP. 2659-2681				
		SPILIOTIS et al., "Enhanced Optical Purity of 3-Hydroxyesters Obtained by Baker's Yeast Reduction of 3-Ketoesters", <i>Tetrahedron Letters</i> , Vol. 31, No. 11, 1990, pp. 1615-1616				

Examiner Signature		Date Considered
--------------------	--	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov), MPEP 901.04 or follow the hyperlink from the title of the document to the intranet. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to indicate here if English language Translation is attached.